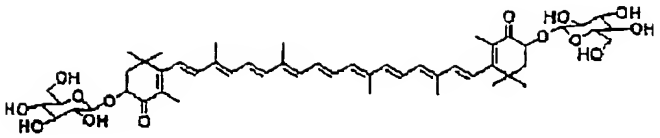
A17

PUBLICATION NUMBER : 10327865
PUBLICATION DATE : 15-12-98

APPLICATION DATE : 29-05-97
APPLICATION NUMBER : 09140460

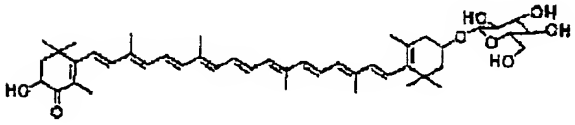


I

APPLICANT : KAIYO BIO TECHNOL KENKYUSHO:KK;

INVENTOR : YOKOYAMA AKIHIRO;

INT.CL. : C12N 15/09 A01H 1/00 A23L 1/272 C07H 15/203 C12N 1/21 C12P 23/00 // A23L 2/58 C09B 61/00 (C12N 15/09 , C12R 1:01 ), (C12N 15/09 , C12R 1:05 ), (C12N 15/09 , C12R 1:18 ), (C12N 1/21 , C12R 1:19 ), (C12P 23/00 , C12R 1:19 )



II

TITLE : CAROTENOID GLYCOSIDE AND ITS PRODUCTION

ABSTRACT : PROBLEM TO BE SOLVED: To produce a new carotenoid glycoside, comprising astaxanthin diglucoside and adonixanthin 3'-glucoside, having a high polarity and a high solubility in water and useful as a color tone improving agent for cultured fishes and shellfishes, a food additive, etc.

SOLUTION: This new carotenoid glycoside comprises astaxanthin diglucoside represented by a chemical structural formula of formula I and adonixanthin 3'-glucoside represented by a chemical structural formula of formula II, has a high polarity and a high solubility in water and is useful as a color tone improving agent for cultured fishes and shellfishes, a food additive, etc. The compounds are obtained by transferring all or a part of carotenoid biosynthesis genes crtE, crtB, crtI, crtY, crtZ, crtX and crtW into a microorganism, making the seven genes present therein so as to enable the expression, culturing the resultant transformed microorganism in a culture medium and collecting the prepared product from the resultant cultured product.